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EXAMINER

CHEN, TE Y

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 08/07/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/751,862

Applicant(s)

DAKE, STEVEN C.

Examiner

Susan Y Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Response to Amendment

1. This is in response to amendment filed on 06/02/2003.
2. Claims 1 - 26 are pending for examination.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of Futral et al. (U.S. Patent No. 6,044,415). Although the conflicting claims are not identical, they are not patent-ably distinct from each other because these two systems claim substantially the same method, apparatus and storage medium program product to perform functions as following: Fast transferring I/O data In a client/server network file distribution environment via a virtual I2O interface of an

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interconnect system with I/O peripheral devices without the overhead of kernel services by the operating system. Wherein, the interface receives file I/O access request from the client, associating an identifier with the file, and sends the request to an I/O server. The server responds with acknowledgement message, searching for file information in the network and executing the requested I/O operations via a processor.

Although the instant application specifically claims transporting file name and identifier instead of a virtual address as claimed by Futral et al. via an interconnect system between client and server. However, It is well known in the art, that the claimed file name and identifier will be mapped into unique numeric virtual address at Internet Protocol (IP) level of a standard network OSI model. Thus, It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the conventional technique by embedding the claimed file name and identification into the file accessing message at the claimed client/server application level communication, because by doing so, a file name and identification are more meaningful than a numeric virtual address to the client/server, and the system will still bind to the network protocol transporting standard.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1-2, 4-5, 9, 11-14, 16-23, and 25-26, are rejected under 35

U.S.C. 102(e) as being anticipated by Balabine et al. (U.S. Patent No. 6,442,548).

As to claims 1-2, 4-5, 9, 11-14 and 16-21, Balabine et al. (hereinafter referred as Balabine) discloses a computer system with method, apparatus and storage medium program product to perform the following steps, comprising:

a) a client software [for example, IXFS file system navigation tool, 200, Fig. 2; 302, Fig. 3] to receive a request from a user for a file having a file name, assigns a unique identifier to the file name and send unique identifier and file name to a database server [for example, Informix® Universal Server, col. 1, lines 60-65; 403, Fig. 3; Fig(s) 5A-5C; Fig. 6; col. 5, lines 5-21, 35-44; col. 6, lines 5-33].

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b) a database server locates file information using the file name and identifier, and stores corresponding file information [col. 5, lines 55-66; col. 6, lines 47-54];

c) an interconnect system transports the unique identifier and file name between the client and server [IXFS, 300, Fig. 3; col. 5, lines 23-32, Fig. 6].

As to claim 22, Balabine further discloses that the client comprises an operating system service module [for example, OS Kernel, 702, Fig. 7].

As to claim 23, Balabine further discloses that the server comprises an intermediate service module [for example, 707, 708, Fig. 7; 807, 808, Fig. 8].

As to claim 25, Balabine further discloses the system having means to perform file management including:

- a) a file system interface [for example, IXFS file system navigation tool, 200, Fig. 2] to receive a request for a file having name and assigned unique identifier [IXFS magic string; col. 10, 8-15] to the file name [e.g., Fig. 5A-5C];
- b) a file system manager to locate file information using the file name and store file information using the unique identifier [for example, IXFS Daemon Module, 708, Fig. 7; 808, Fig. 8; col. 9., lines 15-37];

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- c) a communication system to communicate the unique identifier and file name between the file system interface and file system manager [for example, NFS Front-end Daemon, 804, Fig. 8; col. 9, lines 38-53].

As to claim 26, the recited features are inherent of network File System (NFS).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 6-8, 10 and 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Balabine (U.S. Patent No. 6,442,548), in view of Matsumani et al. (U.S. Patent No. 5,619,690).

As to claims 3, 6-8, 10 and 15, Balabine discloses all the features as claimed by applicant, except he did not expressly teach issuing an acknowledgement message from the server to a client after receiving file access request from the client.

However, Matsumani et al. discloses a server issuing an acknowledgement message to a client after receiving file access request from

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the client [105, Fig. 5; col. 3, lines 43-54]. Thus, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Balabine and Matsumani, because by applying Matsumani's message notification means in Balabine's file handlers would allow Balabine's system having a two-way communication mechanism between client and server, so as to detect any possible network communication failures and ensure the system integrity.

Claim Rejections - 35 USC § 103 (Continue)

6. Claim 24, is rejected under 35 U.S.C. 103(a) as being unpatentable over Balabine (U.S. Patent No. 6,442,548), in view of Matsumani et al. (U.S. Patent No. 5,619,690) and further in view of Applicant Admitted prior art (AAPA).

As to claim 24, Balabine and Matsumani disclose the interconnected system operates in accordance with a peripheral component interconnect system [for example, see Fig. 2], they did not specifically disclosed the interconnect system operates in I2O.

However, AAPA specifically discloses I2O is a conventional existing technique [Page 9, lines 16-20 of Applicant's specification]. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the conventional I2O technique at the combined system of Balabine and Matsumani, because by having an existing I2O as a subcomponent in the combined system would enlarge the system services scope.

Response to Arguments

7. Applicant's arguments filed on 06/02/2003 have been fully considered but they are not persuasive.

Applicant argues with respect to the Obviousness-type double patenting rejection as following:

a) "The Office Action states that Futral describes communicating a virtual address between a client and a server. Futral describes a technique where multiple processes may access an I/O device within an I/O Processor (IOP) in a controlled and secure manner. Futral, Col. 2, Lines 23-27. Futral does not discuss communicating a virtual address in any context, let alone as a file name or identifier. Although Futral does mention that "[e]ach IOP has its own virtual space," Futral does not discuss the use of this virtual address space for any application. Futral, Col. 5, Lines 53-54"; and

b) "The IP level does not convert a file name or identifier into a virtual address. Rather, the IP level may encapsulate information and send it using a destination IP address, which is unrelated to the embodiments."

In response to a), the examiner points out that since the above Applicant's argument admitted: 1) Futral's system provides multiple input/output processing for data accessing; and 2) for each IOP has its own virtual space, as such, contrary to applicant's conclusion that "Futral does not discuss the use of this virtual address space for any application", Futral does successfully disclose the use of virtual address space for each of the multiple input / output application processing.

In response to b), the applicant's attention is directed to the original Office citation (dated 2/10/2003) as following:

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"It is well known in the art, that the claimed file name and identifier will be mapped into unique numeric virtual address at Internet Protocol (IP) level of a standard network OSI model. "

Here, the examiner emphasis that the features claimed by applicant is well known in the network communication art of the Open System Interconnection (OSI) reference model. This model is a fundamental blue print designed to help guide the creation of networking hardware and software communication by the International Organization for Standardization (ISO). As such, plenty of prior art bind to the standard set up by ISO. For example, Instead of hiding the information into unique numeric virtual address for network communication at the IP level of the model, the prior art (i.e., Ji et al.'s U.S patent No. 5,623,600) specifically discloses a technique to embed the file name / identification into a file accessing message at a client/server application level as claimed by applicant [see. Abstract lines 13-21; steps 604-606 of Fig. 6A, etc.]. Thus, to one of ordinary skill person in the art, at the time the invention was made, It would have been obvious to apply this well known technique by embedding the file name / identification into the file accessing message at the client / server application level as claimed by applicant. Since by doing so, the file name / identification is more meaningful at the higher client / server application level than a numeric virtual value at lower IP address level of the model. Further, since the numeric value maps (or encapsulates) the file / identifier information which is not only facilitating the network transmission but also allowing the system binding to the network standard. In addition, the examiner respectfully traverses the applicant's interpretation of the term "mapping" [as cited in previous office action, page 3,

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section 5, filed on 02/10/2003] to the word "convert". The word "mapping" is meant by "picture element into" as shown by Fig. 4 of the '600 patent. It does not mean to change one element to another as that of the word "convert".

Applicant argues with respect to the U.S. Code 102 rejection, that the prior art on record including Balabine (USPN 6,442,548), fails to disclose or suggest a IXSF system that associates an identifier to a file name, and then sends the identifier and the file name to a server.

In response to this argument, the examiner points out that the applicant fails to define the metes and bounds of the claimed subject matter "identifier", so it is open for any reasonable interpretation. Further, Balabine specifically discloses a unique identifier [e.g., the pointer to the data object (608), Fig. 6] and a file name [e.g., the Name (601), Fig. 6], they are associated in a File Object [e.g. the File Object (600), Fig. 6;] via an IXSF system [e.g. 300, Fig. 3; col. 7, lines 5-8]. Balabine further discloses the IXFS [e.g. 300, Fig. 3] system can provide the access to two or more databases (or servers) and present (or transport) the encapsulated database object (i.e. the File object; col. 7, lines 13-16, lines 20-22) with unique identifier and file name to an application (or client) [col. 7, lines 51- col. 8, line 2].

Applicant argues with respect to the U.S. Code 103 rejection as following:

1) the prior art on record including Balabine (USPN 6,442,548), Matsumani (USPN 5,619,690) and Applicant Admitted Prior Art (AAPA), provide no teaching

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to combine these three references"; 2) "three references are needed is evidence of the complexity of the claimed embodiments and hence non-obviousness".

In response to argument 1), the examiner points out that Balabine expressively cites that his invention is deemed to be tailored to virtually any type of application so that the database will appear as a collection of file system objects that are consistent with the application's other file system objects [see col. 4, lines 17-23]. As such, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, with the teachings of Balabine and Matsumani et al. in front of him, to modify Balabine's system with a coded file handler having the message notification means of Matsumani [e. g., see 105, Fig. 5; col. 3, lines 43-54] as a database object for Network File System (NFS) communication as suggested by Balabine [e.g. see Balabine's col. 3, lines 31-42]. Because by doing so, the system will provide a two-way communication mechanism between client and server and able to detect any possible network communication failures and ensure the system integrity.

In response to argument 2), the number of references used in a rejection is not a measure of nonobviousness. The issue at hand is simply whether the claimed subject matter would have been obvious to the ordinary skilled artisan at the time the invention was made.

As such, based on the discussions above the examiner maintains the same rejections.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Y Chen whose telephone number is (703) 308-1155. The examiner can normally be reached on 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (703) 308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-6296.

Susan Chen

August 5, 2003



SAFET METJAHIC
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